

REMARKS/ARGUMENTS

This is in response to the Office Action mailed July 25, 2005. Claims 1, 5, 6, 50 and 52-53 have been amended, claims 4 and 56 have been cancelled and new claims 61-64 have been added. Support for these amendments can be found throughout the originally filed application, e.g., page 2, lines 28-29, page 5, lines 17-18, page 13, line 1, and page 19, table 4. The independent claims have been amended to include features from dependent claims 4, 52 and 57, i.e., a restricted caloric diet and specific amounts of calcium or dairy. No new matter is introduced and these are not intended to be narrowing amendments. Independent claim 1 and its dependent claims 5-6, 27-49 and 52-53, independent claim 50 and its dependent claims 51, 54-55 and 57-60, and independent claim 61 and its dependent claims 62-64 are currently pending and at issue.

Claim Rejections - 35 U.S.C. §112, second paragraph

The Examiner has rejected claims 1, 4-6, and 27-60, under 35 U.S.C. §112, first paragraph, because allegedly the specification does not reasonably enable a person skilled in the art to use the invention commensurate in scope with the present claims. The Examiner asserts that these new rejections are based on an admission by one of the inventors citing an Express article dated July 19, 2005, page 10. Applicants disagree with the Examiner's characterization that the article contains admissions by one of the inventors. The article merely summarizes an interview with one of the inventors regarding scientific research results, and is hearsay by the reporter. There are no quotes from Dr. Zemel and the article is therefore not relevant to the prosecution of this application. This rejection is traversed. The Applicants respectfully request that this rejection be withdrawn.

Claim Rejections - 35 U.S.C. §§ 101 and 112

Claim 51 has been rejected under U.S.C. 101 and 112 because its subject matter is allegedly inoperative and therefore lacks utility and enablement. The Examiner asserts that there is no evidence that the claimed method can prevent weight gain and that the Applicants do not provide a definition as to what is intended by the term "preventing." However, claim 51 does not contain the term "preventing." The Applicants respectfully request that this rejection be withdrawn.

Claims 1, 4-6, and 27-60 have been rejected under U.S.C. 101 and 112 because the claimed invention is allegedly inoperative and therefore lacks utility and enablement. The Examiner bases this assertion on the cited Express article wherein Dr. Walter Willet states that certain randomized trials do not show a weight loss, but rather a weight gain. Based on this statement alone, the Examiner concludes that the claimed invention is inoperative and lacks utility and enablement.

Applicants disagree both with the citation of the article and to the substance of this rejection because the present claims have a well-established utility that is credible and useful for a particular purpose (specific and substantial) in accordance with 35 U.S.C. 101 and 112, first paragraph, and the Guidelines as set forth in MPEP 2107, II, (A)(3) and (B)(1).

Credibility should be assessed from the perspective of one of ordinary skill in the art in view of the disclosure and any other evidence of record that is probative of the applicants' assertion (MPEP 2107, II, (B)(1)(ii)). Utility of the original and present claims is well established and supported throughout the originally filed application, e.g., Examples 1 and 2.

The present claims are directed to methods for treating, reducing or attenuating obesity by administering at least about 400 or 773 mg/day of calcium or 57 servings/month of dairy product to induce weight loss in an individual maintained on a restricted caloric diet. The utility of these

claims are credible, specific and substantial. According to the Guidelines (MPEP 2107.02, VII), the applicants do not have to provide evidence sufficient to establish that an asserted utility is true beyond a reasonable doubt or as a matter of statistical certainty. Nor do the applicants have to provide actual evidence of success in treating humans where such a utility is asserted. Instead, all that is required is a reasonable correlation between the activity and the asserted use.

In Examples 1 and 2 of the present application, transgenic mice expressing agouti specifically in adipocytes under the control of the aP2 promoter are used. These mice exhibit a normal pattern of leptin expression and activity similar to that found in humans and exhibit a human pattern (adipocyte-specific) of agouti expression. The testing in this animal model provides a satisfactory correlation between the effect on an animal and that ultimately observed in human beings, and the results are reasonably correlated to a particular therapeutic or pharmacological utility. As explained in MPEP 2107.03, I and III, such data should almost invariably be deemed sufficient to establish utility.

In Example 2, mice were placed on a modified AIN 93-G diet with suboptimal calcium (0.4%), sucrose as the sole carbohydrate source and lard added to increase fat to 25% of energy for six weeks. The mice that exhibited diet-induced obesity were randomly assigned to five groups. One group was continued ad lib on the same low calcium (0.4%) diet with no modification, while the other four groups were maintained with energy restriction (70% of ad lib). The mice in basal restriction group were placed on the basal low calcium (0.4%) diet with Kcal-restriction. A high calcium energy restricted group received the basal diet supplemented with calcium increased to 1.2%. Two additional groups, termed medium dairy and high dairy, were fed modified basal diet in which either 25 or 50% of protein was replaced by non-fat dry

milk, with total dietary calcium increased to 1.2 or 2.4%, respectively. Energy restriction resulted in a body weight loss by 11% compared to ad lib group. However, markedly greater weight reductions of 19, 25 and 29% were observed in the high calcium, medium and high dairy groups, respectively.

These results should be deemed sufficient to show utility in accordance with the present claims as indicated in the Guidelines. For example, according to guidance in MPEP 2107.01, II, to satisfy §101, partial success or merely a small degree of utility is sufficient. Generally, a rejection of non-utility cannot be sustained without proof of total incapacity. There is no such proof here. Indeed, far from presenting a preponderance of evidence of incapacity, the Examiner has not even met the initial burden to establish a prima facie case of lack of utility in accordance with MPEP, IV, having failed to consider the examples and the prior art and evidence submitted by the Applicant.

No scientific evidence, data or studies are given or identified to contradict the inventor's assertions. Instead, the Examiner simply offers Dr. Willet's assertion that certain randomized clinical trials do not show weight loss. Applicants believe that Dr. Willet is referring to secondary analysis of clinical trials that were not originally conducted with obesity endpoints in mind and, therefore, were not appropriately controlled for weight management studies. Such analyses are not persuasive in view of the specific evidence provided herein.

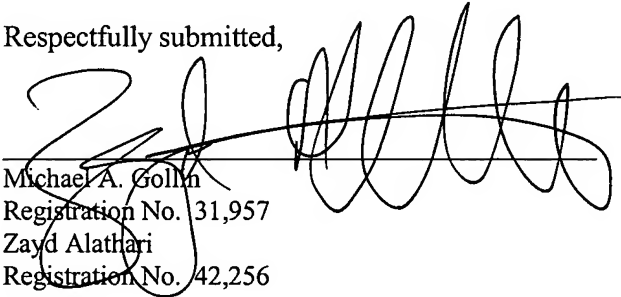
Moreover, Applicants have previously submitted overwhelming evidence from leading industry members praising Dr. Zemel's work. In addition, Dr. Zemel has repeatedly conducted additional studies and clinical trials on the role of calcium and dairy on weight loss in humans which he has published in a book (Zemel, M.B., "The Calcium Key," John Wiley & Sons, Inc.,

Hoboken, N.J. 2004) and numerous publications, for example, Zemel, M.B., Shi, H., Greer, B., DiRienzo, D. and Zemel, P.C. , Regulation of adiposity by dietary calcium, *FASEB J* 14:1132-1138 (2000); Zemel, MB, Thompson, W, Milstead, A, Morris, K, Campbell, P, Calcium and dairy acceleration of weight and fat loss during energy restriction in obese adults, *Obesity Research* 12:582-590 (2004); Zemel, MB, Richards J, Mathis S, et al., Augmentation of total and central fat loss in obese subjects, *Int J Obesity*; 29:391-397 (2005); and Zemel, MB, Richards, J., Milstead, A. and Campbell, P., Effects of Calcium and Dairy on Body Composition and Weight Loss in African-American Adults, *Obesity Res* 13:1218-1225 (2005). If the Examiner wishes, the Applicants can provide copies of these references.

This rejection is traversed. The Applicants respectfully request that this rejection be withdrawn.

Applicants respectfully submit that their application is now in condition for allowance. Should any questions remain, please contact the undersigned.

Respectfully submitted,



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